Curriculum Vitae

Wei-Ting Chen

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Education:

* Ph.D., Environmental Science and Engineering, California Institute of Technology (2008)
* M.S., Environmental Science and Engineering, California Institute of Technology (2004)
* B.S., Atmospheric Sciences, National Taiwan University (2001)

Research Interests:

* Application of remote sensing observations of cloud, precipitation, and aerosols
* Aerosol direct and indirect climatic effects
* Cloud microphysics and dynamics
* Global climate modeling
* Interactions between climate, tropospheric chemistry, and aerosols

Professional Experience:

* Postdoctoral Associate, Jet Propulsion Laboratory, California Institute of Technology, Pasadena, (May, 2009-Present)
* Postdoctoral Associate, California Institute of Technology, Pasadena, (Jan.-Apr., 2009)
* Graduate Research Assistant, California Institute of Technology, Pasadena (2002-2008)
* Graduate Teaching Assistant, California Institute of Technology, Pasadena (Winter Quarter 2004 and Fall Quarter 2006)
* Research Assistant, National Taiwan University, Taipei (2001- 2002)

Honors, Awards, and Scholarships:

* 1997-2001, National Taiwan University President's Awards
* 2002-2003, Vito Vanoni Fellowship

Research Experience:

* Analyze CloudSat, ECMWF analysis, and A-Train observations of various cloud types. Identify patterns and trends in cloud water content, cloud microphysics, and precipitation intensity associated with the variation of environmental thermodynamic parameters such as

column water vapor, relative humidity, and boundary layer stability.
* Analyze the structures and sensitivity of deep convection from co-located CloudSat and A-Train observations, and compare with plume model results and high resolution YOTC ECMWF model output.
* Investigate the sensitivity of partitioned CloudSat ice water mass (i.e. small and large ice water mass) to the choices of CloudSat retrieval algorithm and cut-off ice particle size.
* Development of GISS-II' GCM for simulating the climate responses to aerosol direct and indirect effects
* Improvements of the Multiangle Imaging SpectroRadiometer (MISR) algorithm for retrieving biomass burning aerosols

Publications:

Liao, H., W.-T. Chen, and J. H. Seinfeld (2006), Roles of Climate Change in Global Predictions of Future Tropospheric Ozone and Aerosols, *J. Geophy. Res.*, *111*, D12304, doi:10.1029/2005JD006852

Chen, W.-T., H. Liao, and J. H. Seinfeld (2007), Future climate impacts of direct radiative forcing of anthropogenic aerosols, tropospheric ozone, and long-lived greenhouse gases, *J. Geophy. Res.*, *112*, D14209, doi:10.1029/2006JD008051.

Chen, W.-T., R. A. Kahn, D. Nelson, K. Yau, and J. H. Seinfeld (2008), Sensitivity of multiangle imaging to the optical and microphysical properties of biomass burning aerosols, *J. Geophy. Res.*, *113*, D10203, doi:10.1029/2007JD009414.

Liao, H., Y. Zhang, W.-T. Chen, and J. H. Seinfeld (2008), Effect of chemistry-aerosol-climate coupling on predictions of future climate and future levels of tropospheric ozone and aerosols, *J. Geophys. Res.*, *114*, D10306, doi:10.1029/2008JD010984.

Raes, F., H. Liao, W.-T. Chen, and J. H. Seinfeld (2010), Atmospheric chemistry - climate feedbacks, *J. Geophys. Res.*, *115*, D12121, doi:10.1029/2009JD013300.

Chen, W.-T., A. Nenes, H. Liao, P. J. Adams, J.-L. F. Li, and J. H. Seinfeld (2010), Global climate response to anthropogenic aerosol indirect effects: Present day and year 2100, *J. Geophys. Res.*, *115*, D12207, doi:10.1029/2008JD011619.

Chen, W.-T., Y. H. Lee, P. J. Adams, A. Nenes, and J. H. Seinfeld (2010), Will black carbon mitigation dampen aerosol indirect forcing?, *Geophys. Res. Lett.*, *37*, L09801, doi:10.1029/2010GL042886.

Chen, W.-T., C. P. Woods, J.-L. Li, D. E. Waslier, J. Chern, W. K. Tao, J. Jiang, A. Tompkins, Partitioning CloudSat ice water content for comparison with upper-tropospheric ice in global atmospheric models, *J. Geophys. Res.*, submitted.

Presentations:

Sensitivity of multiangle imaging to the optical and microphysical properties of biomass burning aerosols, poster presentation, American Geophysical Union, San Francisco, CA, 2005

Future climate impacts of direct radiative forcing of anthropogenic aerosols, tropospheric ozone, and long-lived greenhouse gases, poster presentation, American Geophysical Union, San Francisco, 2006.

Sensitivity of multiangle imaging to the optical and microphysical properties of biomass burning aerosols, poster presentation, Gordon Research Conference on Radiation and Climate, New London, NH, 2007.

Global climate response to anthropogenic aerosol indirect effects: Present day and year 2100, oral presentation, American Geophysical Union, San Francisco, CA, 2008.

Developing and applying a CloudSat-centric A-Train and ECMWF analysis data set to better characterize clouds and convections, poster presentation, Joint CALIPSO-CloudSat Science Team Meeting, Madison, WI, 2009.

Developing and applying a CloudSat-centric A-Train and ECMWF analysis data set to better characterize clouds and convections, oral presentation, American Geophysical Union, San Francisco, CA, 2009.

The Structure and Environment of Tropical Deep Convective Clouds From A CloudSat-Centric A-Train and ECMWF Analysis Data Set, poster presentation, Western Pacific Geophysics Meeting, Taipei, Taiwan, 2010.

Partitioning CloudSat ice water content for comparison with upper-tropospheric ice in global atmospheric models, poster presentation, International Symposium on the A-Train Satellite Constellation 2010, New Orleans, LA, 2010.

Partitioning CloudSat ice water content for comparison with upper-tropospheric ice in global atmospheric models, poster presentation, American Geophysical Union, San Francisco, CA, 2010.